UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/438,084	11/10/1999	GREGG EVAN ROTHERMEL	6954-2	8859

20575   7590   09/24/2003

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EXAMINER
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ART UNIT	PAPER NUMBER
2122	9

DATE MAILED: 09/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 07-01)

Office Action Summary	Application No. 09/438,084	Applicant(s) ROTHERMEL ET AL.	SV
	Examiner Ted T. Vo	Art Unit 2122	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 June 2003* .

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-31 and 43-67* is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-31, 43-67* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

　　If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a)☐ All b)☐ Some * c)☐ None of:

　　　1.☐ Certified copies of the priority documents have been received.

　　　2.☐ Certified copies of the priority documents have been received in Application No. _____ .

　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

　　a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .

4)☐ Interview Summary (PTO-413) Paper No(s). _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: .

DETAILED ACTION

1.   This action is in response to the communication filed on 6/16/2003.

Claims 32-42 are canceled. Claims 56-67 are newly added. Claims 1-31, 43-55 are original

claims.

Claims 1-31, 43-67 are pending in the application.

Response to Amendment

2.   The objection to the abstract, which is amended, is withdrawn.

Response to Arguments

3.   Applicant responsive to the prior office action by submitting the declarations is fully considered.

However, the arguments and the exhibits shown in the applicant submitted declarations are not

persuasive.

With the submission of the declarations, applicants argue that the exhibits would overcome the office

rejection.

Examiner respectfully responds: In the two separated declarations signed by Applicants, LiXin and

Burnett, the declarations admitted the anticipated prior art that was mailed to applicants by the office,

"What You See Is What You Test: A Methodology for Testing Form-Based Visual Programs", as being

published before its cited date. According to the statement signed by LiXin (Declaration of Lixin Li under

rule 37. C.F.R. 1.131) and the statement signed by Burnett (Declaration of Margaret Myers Burnett under

rule 37. C.F.R. 1.131), the two statements admitted that the publication date of the anticipated prior art is

on April 1997. That is more than one year prior the priority date of the application for patent. The

declarations submitted by applicants promote the rejection under USC 102(b), instead.

In the declaration signed by DuPuis, it acknowledged that DuPuis is not co-inventor in the application, but

co-author in the anticipated prior art. The acknowledgement of the DuPuis' declaration, 'known or used by

others in this country', does not overcome the office rejection which is under paragraphs of 35

U.S.C. 102(a).

The rejection thus is maintained.

Claim Rejections - 35 USC § 102

4.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for

the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a
printed publication in this or a foreign country, before the invention thereof by the applicant for a
patent.
(b) the invention was patented or described in a printed publication in this or a foreign country or
in public use or on sale in this country, more than one year prior to the date of application for
patent in the United States.

Claims 1-31, 43-67 are rejected under 35 U.S.C. 102(b) as being anticipated by DuPuis, "What

You See Is What You Test: A Methodology for Testing Form-Based Visual Programs" (Admitted and

signed by applicants in the declaration as being published before 4/1997).

Given the broadest reasonable interpretation of followed claims in light of the specification.

As per claim 3:

"In a computerized spreadsheet containing a plurality of spreadsheet cells, a method for testing a first

spreadsheet cell containing a formula, the method comprising:

collecting one or more test elements (page 201, second column: Task 1, cells, formulas) for the first

spreadsheet cell; tracking an execution trace of the first spreadsheet cell (page 202, second column: task

2); and marking as exercised a subset of the test elements that participated in the execution trace for the

first spreadsheet cell (page 203, first column: task 3, checkmark, question mark; particularly, see figure 6, the check mark on the right top left corner of a test element);

DuPuis discusses three tasks in testing a cell of a form-based visual program. The first task is to collect a formula or a portion of programs that represent the cell (see page 201, figure 4). The second task is to trace the execution of the formula or the portion (see page 202, second paragraph, Task 2). The third task is to validate the execution of the cell (see page 203, first paragraph, task 3).

As per claim 4: Claim is inherent from testing the first cell in claim 3 that is repeated to another cell.

As per claim 5: See task 1; it is du-associations.

As per claim 6: See task 1, the static du-associations are collected.

As per claim 7: See task 1, where the steps of identifying is inherent from the definition of du-associations.

As per claim 8: See task 2; Tracking execution traces.

As per claim 9: See task 3, which is associated with tasks 1-2 and checkmark (page 203: task 3).

As per claim 10: See task 3 and figure 6, where an exercise in the figure is included with du-associations and a checkmark on the right-top corer.

As per claim 11: See task 3 and figure 6, where an exercise in the figure is included with a du-association and a checkmark on the right-top corer.

As per claim 12: See tasks 1-3.

As per claim 13: See task 3 (page 203, first column) and validation tab.

As per claim 14: See task 3 (page 203, first column) and validation tab, where the validation tab is displayed with either blank or a checkmark.

As per claim 15: See task 3 (page 203, first column) and figure 6, for displaying the validation tab.

As per claim 16: See task 4 (page 204, first column: Deleting a cell or change a cell's formula) and recalculation of task 3.

As per claim 17: See task 4 (page 204, first column) with the reflection of new test adequacy status.

As per claim 18: See task 4 (page 204), where the new test status is provided with changing validation tab (see figure 8: UnValidate (C)).

As per claim 19: See task 4 (page 204), where the validation tab is also included with question mark (see task 3, and figure 8).

As per claim 20: The update test results the display (page 204, second column).

As per claim 21: The update test results the display of checkmarks and question marks into question marks (page 204, second column).

As per claim 22: Claims is inherently in the mean of the symbols, checkmark and questionmark, used for validation and uncertainty.

As per claim 23: See task 4 (page 204), where updating test status provides adjusting validation tab statuses.

As per claim 24: See task 4 (page 204, deleting cell's formula).

As per claim 25: See task 4 (page 204, deleting cell's formula), where updating test status provides adjusting validation tab statuses.

As per claim 26: See algorithm of figure 7.

As per claim 27: See task 4 with updating.

As per claim 28: See task 3 with validation.

As per claim 29: See data analysis (page 206, first column).

As per claim 30: See figure 6.

As per claim 31: Claim is inherent in the step collecting test elements in the first spreadsheet cell.

As per claim 56: Regarding claim 56 limitation, DuPuis shows the calculation of execution trace and allows the calculation and display to reflect 'testedness' (page 204, see in Task 4 section, second column, first paragraph, 'dynamic execution trace information' and "testedness").

As per claim 57: Regarding claim 57 limitation, DuPuis' calculation allows display to reflect 'testedness' (page 204, see in Task 4 section, second column, first paragraph, 'display of new border colors to reflect the new "testedness").

As per claim 58: Regarding claim 58 limitation, DuPuis' calculation allows display to reflect 'testedness' (page 204, see in Task 4 section, second column, first paragraph, 'display of new border colors').

<u>As per claim 59</u>: Regarding the limitation of claim 59, DuPuis uses visual feedback that is intertwined with the program construction process (page 198, second column, last paragraph, and see page 205, section 4 Empirical Results, first column, 'what is needed for borders to turn blue...').

<u>As per claim 60</u>: Regarding the limitation of claim 60, DuPuis allows adjust validation tab status (page 204, see in Task 4 section, second column, first paragraph, 'We must also adjust...').

<u>As per claim 61</u>: Regarding the limitation of claim 61, DuPuis allows recalculating that results new border colors to reflect the NEW "testedness" (page 204, see in Task 4 section, second column, first paragraph, 'new "testedness"').

<u>As per claim 62</u>: Regarding claim 62 limitation, DuPuis shows the calculation of execution trace and allows the calculation and display to reflect 'testedness' (page 204, see in Task 4 section, second column, first paragraph, 'dynamic execution trace information' and "testedness").

<u>As per claim 63</u>: Regarding claim 63 limitation, DuPuis' calculation allows display to reflect 'testedness' (page 204, see in Task 4 section, second column, first paragraph, 'display of new border colors to reflect the new "testedness").

<u>As per claim 64</u>: Regarding claim 64 limitation, DuPuis' calculation allows display to reflect 'testedness' (page 204, see in Task 4 section, second column, first paragraph, 'display of new border colors').

<u>As per claim 65</u>: Regarding the limitation of claim 65, DuPuis uses visual feedback that is intertwined with the program construction process (page 198, second column, last paragraph, and see page 205, section 4 Empirical Results, first column, 'what is needed for borders to turn blue...').

<u>As per claim 66</u>: Regarding the limitation of claim 66, DuPuis allows adjust validation tab status (page 204, see in Task 4 section, second column, first paragraph, 'We must also adjust...').

<u>As per claim 67</u>: Regarding the limitation of claim 67, DuPuis allows recalculating that results new border colors to reflect the NEW "testedness" (page 204, see in Task 4 section, second column, first paragraph, 'new "testedness").

<u>As per claim 1</u>:

Claim 1 is a test method that has claimed functionality corresponding to the claim functionality of claim 3, where,

the teaching of claiming creating a first formula graph corresponds to C's formula graph (see task 2),

the teaching of claiming collecting one or more du-associations corresponds to a collection of static du-assocations (see task 1), the teaching of tracking an execution trace corresponds to the tracking of execution trace on formula graph (see task 2), the teaching of claiming mark as exercised corresponds to the validation (see task 3).

Claim 1 is rejected in the same reason set forth in connecting to the rejection of claim 3.

As per claim 2: Claim is inherent from testing the first cell in claim 1 that is repeated to another cell.

As per claim 43:

Claim 43 is computer readable medium that has claimed functionality corresponding to the claim functionality of claim 3, where the teaching of claiming test element data structure corresponds to a collection of spreadsheet's cells or static du-assocations (see task 1), the teaching of claiming trace data structure corresponds to the tracking of execution trace on formula graph (see task 2), the teaching of claiming mark as exercised corresponds to the validation (see task 3).

Claim 43 is rejected in the same reason set forth in connecting to the rejection of claim 3.

As per claim 44: See figure 8.

As per claim 45: See execution trace in task 2 and figure 8.

As per claim 46: See figure 3 and figure 7.

As per claim 47: See figure 5, du-assocations.

As per claim 48: See figure 6 and figure 7, "checkmark".

As per claim 49: The update test results the display of checkmarks and question marks into question marks (page 204, second column).

As per claim 50: The update test results the display of checkmarks and question marks into blank (page 204, second column).

As per claim 51:

Claim 51 is a system that has claimed functionality corresponding to the claim functionality of claim 43,

Claim 51 is rejected in the same reason set forth in connecting to the rejection of claim 43.

As per claim 52: Claim 52 is a system that has claimed functionality corresponding to the claim

functionality of claim 46, Claim 52 is rejected in the same reason set forth in connecting to the rejection of

claim 46.

As per claim 53: Claim 53 is a system that has claimed functionality corresponding to the claim

functionality of claim 47, Claim 53 is rejected in the same reason set forth in connecting to the rejection of

claim 47.

As per claim 54: Claim 54 is a system that has claimed functionality corresponding to the claim

functionality of claim 48, Claim 55 is rejected in the same reason set forth in connecting to the rejection of

claim 48.

As per claim 55: Claim 55 is a system that has claimed functionality corresponding to the claim

functionality of claim 49, Claim 55 is rejected in the same reason set forth in connecting to the rejection of

claim 49.

Conclusion

5.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth

in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from

the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date

of this final action and the advisory action is not mailed until after the end of the THREE-MONTH

shortened statutory period, then the shortened statutory period will expire on the date the advisory action

is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX
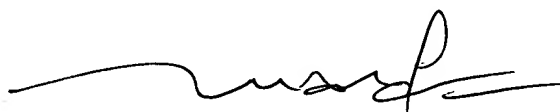
MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should

be directed to Ted T. Vo whose telephone number is (703) 308-9049. The examiner can normally be

reached on Monday-Friday from 8:00 AM to 5:30 PM ET. If attempts to reach the examiner by telephone

are unsuccessful, the examiner's supervisor, Tuan Dam, can be reached on (703) 305-4552.

The fax phone numbers for this Group are:

Official: (703) 746-7239; After Final: (703) 746-7238; Non-Official: (703) 746-7240.

Any inquiry of a general nature or relating to the status of this application or proceeding should be

directed to the Group receptionist whose telephone number is (703) 305-3900.

TUAN DAM
SUPERVISORY PATENT EXAMINER

TTV
September 19, 2003